ASHE Interim Guidance –

The controversy regarding use of Alcohol-based handwash solutions in the Healthcare Setting

Background:

In October 2002, the CDC issued revised guidelines for hand hygiene practices in health care settings. These guidelines call for the use of alcohol-based handwash solutions as an effective tool in reducing hospital acquired infections. In January 2003, JCAHO released a sentinel event alert titled ***Infection control related sentinel events.*** In this alert, JCAHO recommends that organizations comply with CDC's hand hygiene guidelines. But due to concerns regarding the flammable nature of these handwash solutions, a controversy has erupted regarding how to safely introduce handwash products into healthcare facilities.

Fire Safety Concerns

The handwash solutions (available as a gel or foam) typically contain a high volume of alcohol (approx. 60% by weight) and have a flashpoint of approximately 75 degrees F. They are classified as a Class I flammable liquid, and are therefore subject to limitations on placement of dispensers, volume of solution in storage, and disposal of containers. These limitations are based on NFPA 101 *Life Safety Code*, NFPA 30 *Flammable & Combustible Liquids Code,*

and applicable building codes. These codes are enforced by national (e.g. JCAHO and CMS), state (state licensing agencies and state fire marshal), and local (village fire marshal) authorities having jurisdiction (AHJ).

Improved Patient Care

CDC estimates that each year nearly 2 million patients in the United States acquire an infection in hospitals leading to nearly 90,000 deaths. Improving hand hygiene will help prevent the spread of germs from one patient to another. Referring to alcohol-based handwashing solutions, Dr. Steve Solomon, acting director of CDC's healthcare quality promotion division said "These handrubs should help promote hand hygiene because they are much more accessible than sinks, take less time to use and cause less skin irritation and dryness than many soaps." Restrictions on the placement and quantity of the handwash solutions available to healthcare workers may diminish the impact of these solutions on the reduction of hospital-acquired infections (HAI).

The Long term goal - Finding the balance between improved patient care and fire safety

ASHE has commissioned a study, through an independent fire protection consultant, to perform computer based modeling of heat and hot gas development and associated hazards from alcohol based hand hygiene solutions. This modeling will include numerous fire scenarios to capture a reasonable range of potential fire scenarios resulting in an analysis of the overall level of hazard created by the hand hygiene solution. Findings of the study will include recommendations for decreasing the level of hazard presented by the liquid. Upon completion of the study, the results will be shared with all interested parties in an effort to gain consensus on the level of fire risk presented and the appropriate measures to manage the risk.

Interim Guidance

Until the study is completed and a consensus reached, ASHE offers the following interim guidance to minimize the likelihood of fire code violations.

1. Do not place these products in *egress* corridors[1] (exit corridors or areas open to exit corridors).

2. Products may be placed inside patient rooms and in “secondary” corridors” such as inside an ICU suite that has doors leading to an exit corridor. Specific locations should be verified with your state fire marshal if your state has already provided guidance.

3. Storage of product on clinical units should be in clean utility rooms that are rated as 1-hour fire resistant or protected by a sprinkler system. Stock should be kept to small amounts (for routine restocking) not exceeding 10 gallons total.

4. Ensure proper handling and safe storage of large volumes of alcohol-based hand rub supplies as they arrive at your facility in accordance with NFPA codes 30 and 101. Flammable liquid storage cabinets should be used for storage greater then 10 gallons. Consult with your materials management department to discuss the receipt and storage requirements for combustible material.

5. Identify the disposal process for spent containers, especially foam cans containing an aerosol propellant.

This interim guidance is to proactively address the fire code issues. Organizations considering introducing these types of products should contact their local and state fire safety groups to identify the specific requirements of their jurisdiction.

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[1] There are actually two issues (a) flammable material in egress corridor (b) impinging on egress corridor. Specifically (a) NFPA 101 Sec.8.4.3.2 states: “No storage or handling of flammable liquids or gases shall be permitted in any location where such storage (or use of product) would jeopardize egress from the structure, unless otherwise permitted by 8.4.3.1”. (b) NFPA 101 section 7.3.2 (Means of Egress) states that the dispensers may protrude no more than 3.5” into the egress corridor and are also mounted at or below a height of 38”.